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## Animal Industry Report

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AS 650

ASL R1843

2004

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#### Recommended Citation

Kenealy, M. Douglas (2004) "Update from Dairy Science Curriculum," *Animal Industry Report*: AS 650, ASL R1843.

DOI: [https://doi.org/10.31274/ans\\_air-180814-109](https://doi.org/10.31274/ans_air-180814-109)

Available at: [https://lib.dr.iastate.edu/ans\\_air/vol650/iss1/2](https://lib.dr.iastate.edu/ans_air/vol650/iss1/2)

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## Update from Dairy Science Curriculum

### A.S. Leaflet R1843

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Animal Science

#### Summary and Implications

Fall 2003 brought great change to the Dairy Science curriculum with closure of the ISU-Ames Dairy Farm after 95 years as a teaching and research unit. But, considerable opportunity came linked to the change. In the next 2 to 3 years, ISU will sell the Ankeny Dairy Farm and use the proceeds to build a state-of-the-art dairy education and research facility near Ames. In the interim, the Ankeny farm will be utilized to continue the teaching, research, and outreach missions.

There has been much activity related to dairy education and research in northeast Iowa with the N.E. Iowa Community-Based Dairy Foundation farm opening in conjunction with N.E. Iowa Community College and development of the N.W. Business Partnership in dairy.

#### Introduction: Enrollment and Placement Update

Enrollment in Dairy Science was down in 2003 compared to 2002 (44 vs. 50 students). Fall 2003 undergraduate enrollment figures for ISU were:

<b>Dairy Science majors</b>	<b>44</b>
Animal Science majors	505
General Pre-Vet students	30
Total, Animal Science Department	579
Total, College of Agriculture	2,369
Total, ISU	27,380

Note: majors in Animal or Dairy Science may declare pre-veterinary medicine, but the department also manages the undeclared pre-veterinary medicine program (General Pre-Vet) for the university.

Significant increases in Iowa State University (ISU) tuition, general challenges in the Iowa farm economy and specific challenges in the dairy economy have combined to reduce enrollment in agriculture curricula at ISU. Concurrently, the high quality and relatively low cost of community college education in dairy science at Northeast Iowa Community College (NICC) have created an enrollment shift. The long-range view projects increased enrollment of ISU dairy students because ISU and NICC have entered into a unique dual-enrollment status. Students can enroll in Dairy Science at NICC and be granted status as freshmen at ISU. A student completing the prescribed NICC program may elect to move to ISU for their remaining BS education, not as a transfer student but as a continuing ISU junior in Dairy Science. Other privileges include use of the ISU library and admission to ISU activities with the same status as resident students. More on northeast Iowa dairy activities is found later in this paper.

To find out more about opportunities in the Dairy Science curriculum, the Animal Science Department, or ISU, visit this website:

<http://www.public.iastate.edu/~ans/dairy/home.html>

#### Challenges and Opportunities in Dairy Science

Academic year 2003-2004 most certainly unveiled dramatic challenges as well as exciting opportunities for Dairy Science at ISU. The summary phrase might be: old farm closed, new farm on the horizon. That simplistic statement brings focus to change that has occurred, but does not explain the tremendous opportunity that came along with the change.

Budget challenges at ISU forced closure of three College of Agriculture farms, including the ISU Dairy Farm and two research farms related to beef and hogs. These farm closures, along with other program changes, were needed to cover ISU budget shortfalls in 2003-2004. The first action implemented was the closure of the ISU Ames Dairy Farm on October 11, 2003 with the sale of a portion of the dairy herd. Though the closure of the Ames dairy farm will cause short-term changes in teaching programs, adjustments have been made that will allow Animal and Dairy Science programs to maintain their great strength and value.

Some details should be reviewed. ISU had two dairy farms, one in Ames and one in Ankeny. The faculty knew the Ames farm was to be closed in three to five years and that Ames cattle would be consolidated with the Ankeny research farm cattle on a new ISU dairy near Ames. Although the Ames closure came sooner than expected, it fit into plans started many years ago by the dairy faculty.

Adjustments have been made in Animal and Dairy Science courses and programs to allow continued hands-on study and work with dairy cattle until the new farm is opened. A major portion of the Ames herd (about 150 cattle) was moved to the ISU dairy at Ankeny during the fall semester of 2003, and the Jersey herd (about 50 cattle) was moved temporarily to Calmar, IA with the Northeast Iowa Community-Based Dairy Foundation herd. Classes will continue to be taught at the Ames dairy farm, but specific courses or laboratories will begin to transition to Ankeny in spring of 2004. The dairy pavilion in Ames will continue to be used for selected classes during upcoming semesters via moving cattle from Ankeny for laboratories. ISU will provide a shuttle system for students for selected classes and activities to be held in Ankeny. The traditional hands-on part of the dairy program at ISU will continue. Dairy Science will also continue the tradition of maintaining a 6-breed herd for education and research purposes.

There is a silver lining in this short-term challenge. The closure of the Ames dairy will speed up the time-line for development of the new ISU Dairy. The new farm is likely to be located near other animal science farms south of Ames, making it very accessible for classes but outside of the city limits. The new farm will allow us to build upon

the current herds to establish a 500-cow state-of-the-art education, research, and production facility. Combining the opportunities at NICC for dairy education with ISU dairy science and the new ISU dairy facility, the state of Iowa will have the strongest, coordinated “one-two” punch in dairy education and one of the finest research facilities in the country.

Though the ISU Dairy Farm closure will cause short-term changes, the accelerated path to a new farm will help maintain ISU Animal and Dairy Science majors as premier programs in the United States. If you have questions about the herd, the dairy program, or ISU, please do not hesitate to make contact using the following information: telephone at 515-294-6021 or email to [dkenealy@iastate.edu](mailto:dkenealy@iastate.edu).

### **Northeast Articulation Activities**

The late 1990's were critical for implementation of a redesigned Dairy Science curriculum at ISU. Some of the coursework changes were designed specifically to enhance articulation opportunities with Iowa's community colleges. Further support for enhanced articulation comes clearly from the draft of the 2000-2005 strategic plan for ISU. Educational linkage between Dairy Science at ISU and NICC at Calmar was selected to be a model program by Iowa State University.

The Northeast Iowa Community-Based Dairy Initiative is a cooperative effort involving NICC, ISU (Colleges of Agriculture and Veterinary Medicine), and the Northeast Iowa Community-Based Dairy Foundation. The Northeast Iowa Community-Based Dairy Foundation owns the new dairy cattle facility associated with NICC at Calmar.

The Calmar dairy facility has enhanced dramatically the dairy education programs of NICC and is complementary to the new ISU dairy research and education farm to be built near Ames. The programs of the two cooperating dairy curricula will not be duplicative, but will each emphasize the strengths of their institutions. Faculty will continue to pursue programs that are most appropriate at each institution as well as determine those programs that will be enhanced by fully cooperative efforts. For example, the northeast Iowa region was in great need of expanded dairy herdsman training programs in a modern facility. These programs, now taught by NICC at the Foundation farm, serve young people in a traditional college setting, but also support the learning of people who are currently employed and need continuing education from a local college.

The Foundation dairy facility is a natural site for technical programming along with a college transfer program for students desiring to pursue a Bachelor's degree. Staff at the dairy also conduct demonstration research trials related to dairy production and management.

The Foundation dairy serves as an exceptional site for extended education programming and events linking NICC and ISU faculty and programs. Paul Brown, ISU Extension serves as coordinator for the ISU effort in this partnership.

### **Northwest Business Partnership**

While major new efforts were underway in northeast Iowa, dairy professionals in northwest Iowa were also

developing proposals for new educational programs. In 1999 the Western Iowa Dairy Alliance began investigating interest in a program that would provide a combination of on-farm and classroom education to enhance work force development in the dairy industry for western Iowa.

The purpose of the program is to provide advanced qualified individuals the opportunity to develop dairy herd management skills. The proposal calls for on-farm work experience at a variety of upper Midwest dairy operations along with classes to support specific skill development. The formal classroom inputs may come from a variety of regional resources, to include ISU as well as other colleges or universities.

A critical element of the program is the educational linkage with dairy farms in the region of northwest Iowa. Dairy Alliance members have met with key farm owners and managers pursue interest in providing specific training opportunities for program participants.

The program may be implemented at several levels. Some participants may earn continuing education credit while others may complete credit to be applied to a bachelor's degree. The program may grow to support the applied portion of a management-oriented Master's program for dairy professionals. Ron Orth is coordinating the planning efforts on behalf of ISU.

### **Discussion**

A common quotation could be adjusted to reflect, “Times of change are neither all good, nor all bad”. Dairy Science faculty and students have been challenged by a farm closure, but looking forward a short time, they can see the tremendous educational opportunities linked to a new farm. Concurrently, the recent developments in dairy education and business cooperation in northeast and northwest Iowa are exciting for the dairy industry and key linkages for current and future ISU programs.

Faculty and students will maintain the status of the Dairy Science curriculum as one of the nation's premier programs by aggressively pursuing the opportunities created by change and by following the 2000-2005 ISU strategic plan. One unit of the strategic plan states that ISU, and therefore Dairy Science, will “embrace the special character and orientation of the engaged institution” by:

- responsiveness to clients and stakeholders
- respect for partners in education
- academic neutrality in serving as a resource
- accessibility for all constituencies
- integration of mission with responsibilities
- coordination among university entities working in concert with each other
- resource partnerships with government, business, and the non-profit world

All of the bulleted characteristics set forward for the operation of ISU are also fully embraced by the Dairy Science faculty. In fact, these characteristics are foundational to the programs described for partnership activities with the Northeast Iowa Community-Based Dairy Initiative and the Western Iowa Dairy Alliance.